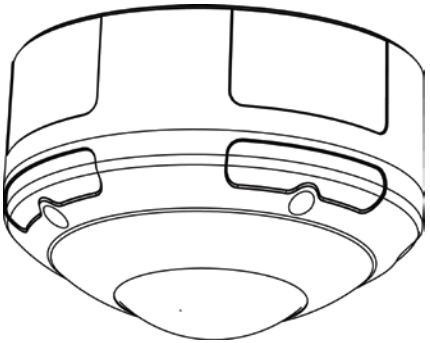
OKINA USA

HD5FEVD-8012

HD SDI 1080P ICR 360° Fisheye Vandal Dome Camera



USER MANUAL

FEATURES

- SDI 1080P - **1920 x 1080**
- SDI / 4 Channel CVBS Output
- 1/3.2” Color CMOS QSXGA 5 Megapixel
- 1.19mm Megapixel Lens
- 12V DC, 550mA max.
- IP66 Rating

⚠ ***Please read the <u>Manual</u> before attempting to use this product.***

Specifications and appearance are subject to change without notice.

FC CE RoHS

HDC-40

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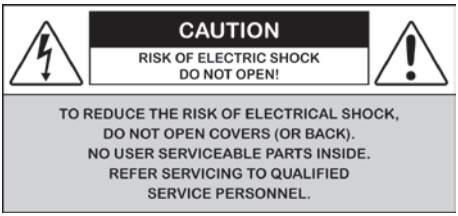
R201402-V19


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN!
TO REDUCE THE RISK OF ELECTRICAL SHOCK,
DO NOT OPEN COVERS (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems.)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CAUTION

1. Never point the camera toward the sun
Do not expose the lens directly to the sun or to strong light as this may damage the pick-up device.

2. Handle this camera with care
Avoid any shock or bumping of the camera. Improper handling could damage the camera.

3. Requires a proper operating environment
This camera is designed for indoor or outdoor use. The allowable temperature range for operation of this camera is between 14°F ~ 122°F / -10°C ~ 50°C.

4. Clean the front face or lens
It is recommended that the surface be cleaned every 3~6 months. Cleaning should be done by using a chamois, a very fine soft cloth, lens tissue, or cotton tipped applicator and ethanol to carefully remove any fingerprint or dust.

5. Check the power source voltage
The power source voltage should be within the specified range. (Camera must meet the specifications). Camera must be connected to a surge protector at all times.

6. Objects and liquid entry
Never push objects of any kind into this camera as this may touch dangerous voltage points of short out parts that could result in a fire or electric shock. Never spill any kind of liquid on the video product.

7. Servicing
Do not attempt to service this video product by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all service to qualified servicing personnel.

8. Damage requiring service
Unplug this video product from the wall outlet and refer service to qualified servicing personnel under the following conditions:

a. When the power supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the video product.
c. If the video product has been exposed to rain or water.
d. If the video product has been dropped or the cabinet has been damaged.
e. When the video product exhibits a distinct change in performance.

LIMITED WARRANTY

OKINA USA products are covered under warranty for one (1) year from the date of purchase. The warranty will automatically be voided if any of the following occurs:

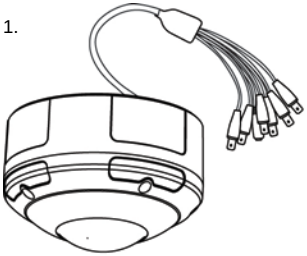
1. Camera sticker is removed
If the camera sticker is removed, we will not be able to confirm any information regarding when and where the product was purchased. We have no other way to verify the purchase record without the serial number on the camera sticker; therefore, it should not be removed.

2. Camera is modified in any way
If the camera is scratched, damaged, or modified in a manner not described in this manual, the warranty will be voided immediately. It is the customer's responsibility to keep the camera in good condition.

3. Video or power cable is cut
The video cable and the power cable should not be tampered with. Cutting or modifying of the cables will result in termination of the warranty.

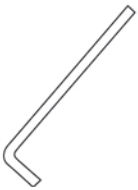
PACKAGE CONTENTS

1. One (1) HD5FEVD-8012 Camera with I/O connection cables
2. Three (3) Wall Mounting Screws
3. Three (3) Wall Anchors
4. One (1) Allen Wrench
5. One (1) User Manual

1. 

2.

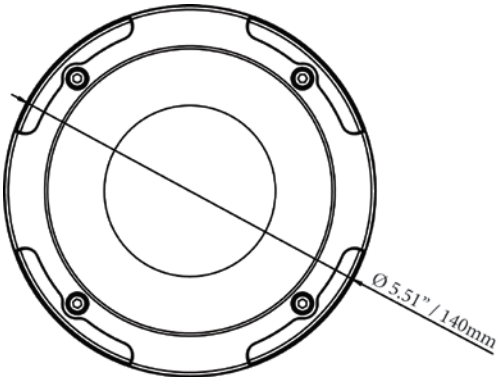
3.

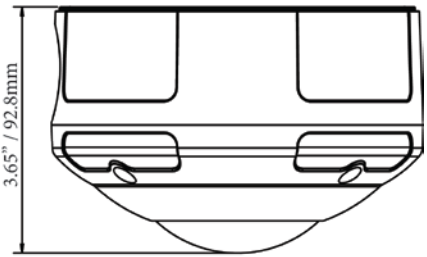
4. 

5.

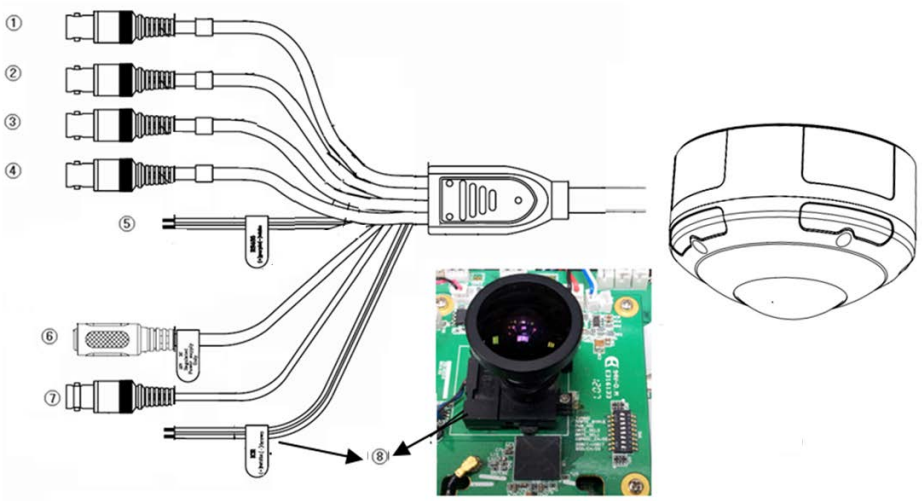
* For any returns, please include all components listed above with original packaging in **Resalable Condition**. **Absolutely No Returns** will be accepted if any component is missing/damaged.

DIMENSIONS (Unit: inches / mm)





I/O CONNECTION



1	Label1	Camera 1 CVBS(BNC) output
2	Label2	Camera 2 CVBS(BNC) output
3	Label3	Camera 3 CVBS(BNC) output
4	Label4	Camera 4 CVBS(BNC) output
5	RS485 cable	Purple + / white -
6	Power cable	DC12V
7	SDI cable	SDI connector output (**BNC gold color**)
8	External IR Cut Trigger	White + / Brown - (3.3V)

This 360° camera can be installed into different configuration thanks to its rich connection. You will have an overview of different scenario in the next pages.

A) Scenario without DVR

1. The camera uses the SDI connector output or the HDMI connector to a HD-SDI monitor that has RS485 built in connector.
   The user points the remote controller to the monitor and controls the camera

2. The camera uses the SDI connector output or the HDMI connector to a HD-SDI monitor that doesn't have RS485 built in connector.
   The user link the 2 RS485 wire from the camera to a keyboard controller

B) Scenario with DVR

1. The DVR only supports SDI signal input

   The camera used the SDI connector output to the DVR SDI input
   The user link the 2 RS485 wire to the RS485 terminal of the DVR
   The DVR uses the HDMI connector output to a HDMI monitor
   The user controls the camera with the mouse or the remote controller of the dvr.

2. The DVR doesn't have SDI signal input and only accepts analog signal

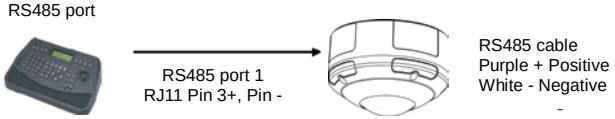
   The camera uses the 4 BNC connector output to the 4 video input of the DVR.
   The user can't access to the 180 and 360° view

3. The DVR can accept both SDI and analog signal

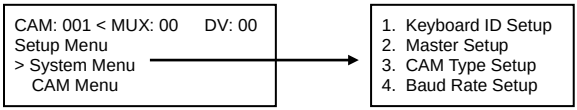
The camera uses the SDI connector output to the DVR.sdi input
The camera uses the 4 BNC connector output to the 4 video input of the DVR
The user links the 2 RS485 wire to the RS485 terminal of the DVR or to the RS485 terminal of the keyboard controller

RS485 CONNECTION

The 360° camera is set in protocol PELCO-D and baud rate 9600.
User can use keyboard, DVR or any RS485 device to control 360° camera.
Ex, keyboard



How to setup connection between keyboard and camera
Press MENU button of keyboard for function setup



Using direction key to select system menu and then press ENTER to get in.
Follow below setting and ready to control camera with command.

1. Keyboard ID Setup: Press ENT -- > Press 1 → Press ENT → Esc
2. Master Setup: Press ENT -- > Press 1 → Press ENT → Esc
3. CAM Type Setup : Press ENT -- > Choose protocol 5:PELCO-D→ Press ENT → Esc
4. Baud Rate Setup: Press ENT -- > Choose Baud Rate 1:9600→ Press ENT → Esc
5. Press "ESC" to exit menu.

Notice, if you are using others keyboard brand, please make sure the protocol setting is on PELCO-D and baud rate 9600. And the control command is same as usual.

Command,
The screen mode default is on mode 5. It displays in 5 windows.(quad + 360°)
Camera 1 ~ 4 is virtual split from 360° screen. User can control camera 1~4 like PTZ dome to do up/down/left/right movement.
Control on screen in mode 5,

1. Press 1 + CAM to call camera 1 and after to use joystick to move.
2. Press 2 + CAM to call camera 2 and after to use joystick to move.
3. Press 3 + CAM to call camera 3 and after to use joystick to move.
4. Press 4 + CAM to call camera 4 and after to use joystick to move.

Recommended Keyboard Controller for Setting

Economical 2-Axis Keyboard Controller
PTZ-KB050

3-Axis Keyboard Controller
PTZ-KB050X

3-Axis Keyboard controller
PTZ-KB250X

ACCESS TO THE CAMERA MENU

Call preset 95: displays the menu of the 360° camera
Use keypad to select item.
Up/down for item chooses, to right enter to sub item.

Call preset 94: will apply immediately the selected mode when user is inside the camera OSD

RS485 CONNECTION WITH DVR

RS485 port

RS485 +

RS485 -

RS485 cable
Purple + Positive
White - Negative

Protocol Configuration

Please go to your DVR RS485 (PTZ) setting. Select the camera and 360◦
It depends on SDI connect to which channel. If camera is on channel 1, please make sure the address is from 1 to 4. And choose protocol is **PELCO-D**, baud rate is 9600.

Please go to your DVR PTZ control mode to start operate 360° camera.

NOTE: When you are inside the camera OSD, if there is suddenly power shortage, the setting will not be saved in the memory. You must exit the OSD or wait the OSD disappears to validate the modified setting in the memory.

OSD OPERATION

Main Menu Structure

Item	Selection	Description
AE	Submenu	Auto exposure
AWB	Submenu	Auto white balance setting
BRIGHTNESS	1 ~ 9	Picture brightness adjust
SATURATION	1 ~ 9	Picture saturation adjust
MD	Submenu	Motion detection setting
MASK	Submenu	Picture mask zone setting
WDR	OFF/MIDDLE/HIGH	Wide dynamic range
NOISE REDUCTION	00~09	Picture noise reduction setting
DAY/NIGHT	AUTO/DAY/NIGHT/EXT	**AUTO** means that camera will adjust automatically the mode after a period of time (0, 3, 5, 10, or 15 seconds) **DAY** means that camera will always be on day mode **NIGHT** means that camera will always be on night mode (black and white) **EXT** means that camera can adjust the mode automatically after a period of time (5, 10, or 15 seconds)
SHOW MODE	WALL 0/ WALL 90/ WALL 180/ WALL 270/ DESK/ CEILING	Select the desired mode and then press enter button or 94 preset(keep press after 2 beeps)
PATTERN	Mode1~model13	Select the desired pattern and then press enter button or 94 preset(keep press after 2 beeps)
SYSTEM	Submenu	System status setup
REBOOT		Will reset the device, just press right arrow to reset it
EXIT		

AE Submenu

AE	50Hz/60Hz	50Hz/60Hz
	SHUTTER SPEED	X3; X2; X1; AUTO; 1/100; 1/120; 1/250
	Return	

MOTION DETECTION Submenu

MD	AREA	ACTION	ON/OFF
		AREA	1~4
		XPOS	0000~1943
		YPOS	0000~1943
		WIDTH	0256~1943
		HEIGHT	0256~1943
		RETURN	
	MODE	ON	
		OFF	
	Return		

MASK Submenu

MASK	MASK	MODE	OFF/ON
		AREA	1~4
		XPOS	0001~1943
		YPOS	0001~1943
		WIDTH	0000~1943
		HEIGHT	0000~1943
		RETURN	
	COLOR	1~5	
	TRANSP	1~3	
	RETURN		

PATTERN Submenu

PATTERN	MODE1	Camera 1+360◦
	MODE2	Camera 2+360◦
	MODE3	Camera 3+360◦
	MODE4	Camera 4+360◦
	MODE5	Quad+360◦
	MODE6	Camera 1+Camera 3+360◦
	MODE7	See below for more details
	MODE8	180° in 16 :9 Display
	MODE9	360° Flat
	MODE10	180◦+Camera 3+Camera 4
	MODE11	180◦+ 180◦
	MODE12	Quad display only
	MODE13	360° display only

When you change the pattern mode, you have to wait 10 sec until it change to selected mode. If you want to immediately see the mode please press the Enter button.

Pattern Mode 7
In this mode user can choose among 4 different angle view, each can have horizontal and vertical flexibility range.

View available	120°	140°	160°	180°
Verticale range	D : 0~5 U : 0~5	D : 0~4 U : 0~4	D : 0~3 U : 0~3	D : 0~2 U : 0~2
Horizontal range	L : 0~5 R : 0~5	L : 0~3 R : 0~3	L : 0~1 R : 0~1	0

SYSTEM Submenu

SYSTEM	CAMERA1	ON/OFF
	CAMERA2	ON/OFF
	CAMERA3	ON/OFF
	CAMERA4	ON/OFF
	AUTOFLIP	ON/OFF
	SETID	If user plans to have more than 1 device in the installation
	LOAD DEFAULT	Will reset the device to factory default
	RETURN	

SET ID

This function is very useful if you plan to install more than one panoramic camera on site
You need to set ID on each camera by using the built in keypad, please don't set same ID on 2 camera, otherwise the control keyboard will call them together

For example if you set ID of the first camera to 1, and the ID of the second camera to 2, when you use the control keyboard you can call any camera from 1 to 8. The below table gives you the camera number

SETID	**CAMERA1**	**CAMERA2**	**CAMERA3**	**CAMERA4**	OSD (displayed next to firmware version)
0	CAMERA1	CAMERA2	CAMERA3	CAMERA4	Nothing (Single device)
1	CAMERA1	CAMERA2	CAMERA3	CAMERA4	SETID 01 (multi device)
2	CAMERA5	CAMERA6	CAMERA7	CAMERA8	SETID 02 (multi device)
	.	.	.	.	
	.	.	.	.	
	.	.	.	.	
16	CAMERA61	CAMERA62	CAMERA63	CAMERA64	SETID 16 (multi device)

COMMAND LIST

For camera 1 to 4 it is possible to define 3 preset points that will be used for the preset cruise (76) and the preset sequence display (66).
To define preset 1 on camera 1
Call camera 1
Select your preset view by adjusting with the joystick
Press 1 then press PRESET button 3 sec until you hear a bip (OSD will display on screen **POINT1**)
(Setting may differ from the type of RS485 device you are using)

Call preset 93: After you selected your desired mode, and that you position the view of the camera, you can save the current view by calling preset 93. OSD will display on screen **SAVE**

Call preset 66: displays each preset without transition ideal for preset whose distance is very long. In this mode the motion detection will be disabled. OSD will display on screen **SCAN**

Call preset 76: run the auto pan function. Osd will display on screen **TOUR.** This function is also available on the keyboard by pressing directly AUTO PAN hot key. In this mode the motion detection will be disabled

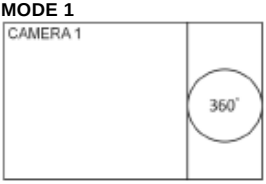
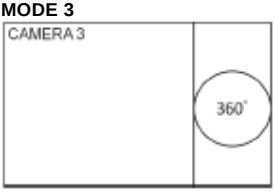
Call preset 95: displays the menu of the 360° camera
Call preset 94: will apply immediately the selected mode when user is inside the camera OSD

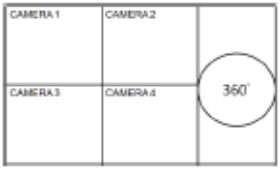
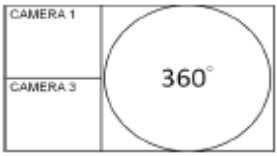
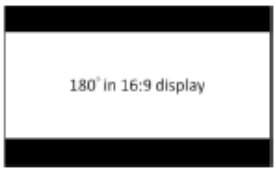
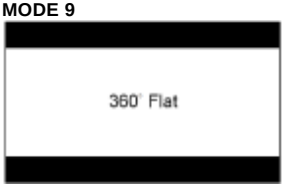
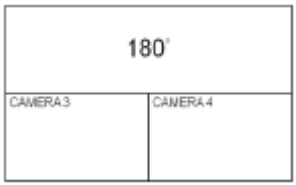
MOTION DETECTION AND TRACKING

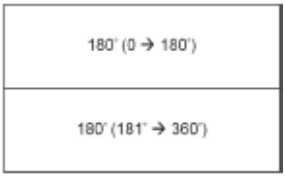
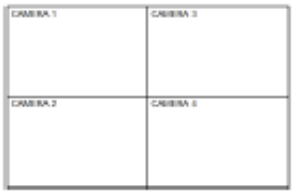
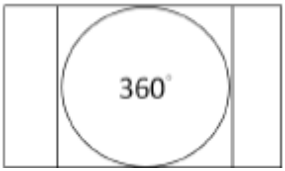
This camera has a motion detection feature and tracks a moving object in the field of view. For configuration without dvr, it can be a good alternative for live monitoring

Due to the high level of processing for the CPU, it can be activated on one channel only.
It doesn't apply for 180° and 360° view. If motion detection is enable.

PATTERN DESCRIPTION

Pattern	Preset Cruise	Preset Sequence	Motion Tracking
MODE 1 	Yes	Yes	Yes
MODE 2	Yes	Yes	Yes
MODE 3 	Yes	Yes	Yes

MODE 4 	Yes	Yes	Yes
MODE 5 	Yes	Yes	Yes
MODE 6 	Yes	Yes	Yes
MODE 7 	No	No	No
MODE 8 	No	No	No
MODE 9 	No	No	No
MODE 10 	Yes	Yes	Yes

MODE 11 	No	No	No
MODE 12 	Yes	Yes	Yes
MODE 13 	No	No	No

ANALOG 4 VIDEO OUTPUT

Mode	Analog Video
1 1 1 1 1	Yes. Only cam 1. Not Recommended.
2 2 2 2 2	Yes. Only cam 2. Not Recommended.
3 3 3 3 3	Yes. Only cam 3. Not Recommended.
4 4 4 4 4	Yes. Only cam 4. Not Recommended.

Mode	Analog Video
5 1 2 3 4	Yes. Cam 1, 2, 3, 4. Recommended.
6 1 1 3 3	Yes. Only cam 1 & 3. Not Recommended.
7~13 ■	No. Not Recommended. *All black screen

NOTE: All camera angle and view can be adjusted by PTZ controller

SPECIFICATIONS

Model		HD5FEVD-8012
Image Sensor		1/3.2” Color CMOS QSXGA (5 Megapixel : 2592x1944) image sensor
Synchronizing		Internal
Scanning System		2:1 Interlace
S/N Ratio		More than 51dB
Electronic Shutter		X3; X2; X1; AUTO; 1/100; 1/120; 1/250
White Balance		Auto
WDR		OFF/Middle/ High
Angle of View	Diagonal	185°
	Horizontal	185°
	Vertical	185°
Gamma Correct		0.45 / 1
RS485		PELCO D / 9600
Video Output		SDI / 4 Channel CVBS
Lens		1.19mm Megapixel Lens / F2.0
ICR		Built-in
Format		1080P
Power Source		12V DC Jack ± 10% / 1A
Power Consumption		6.6W (Max)
Current		550mA (Max)
IP Rating		IP66
Operating Temperature		14°F ~ 122°F / -10°C ~ 50 °C
Storage Temperature		-4°F ~ 158°F / -20°C ~ 70°C
Dimensions		Ø5.51 x 3.10(H) inches / Ø140 x 78.82(H) x 190 mm

**Specifications are subject to change without notice.*

PAL Version also available.

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